

SIR-754AILP-IO
SIR-754AILP-IOP

Operation & Installation Manual

License Plate Capture Series Kit D&N License Plate Camera w/ 11 IR LED Illuminator Housing & Bracket



SHM-7540LPDN-IO



HI11-TKHBL

FC CE

FEATURES

Camera – SHM-7540LPDN-IO

- 1/3" Sony Super HAD CCD II; Sony HQ-1 DSP; 540 TV Lines
- 5.0mm~60.0mm Auto Iris Lens, **Made in Japan**
- 0.08 Lux @ F1.0; I/O Input/Output
- **Mechanical IR Cut Filter (ICR)**; Advanced 8-step Manual Shutter
- Built-in Auto Sense-up; High Gain/Low Noise Amplifier - DNR
- CAR-DC Iris Control is available to achieve reliable license plate recognition for road surveillance when car speed is up to 90 mi/hr (150 km/hr) in the daytime and 90 mi/hr (150 km/hr) at night time with external IR LEDs.
- Dual Power 12V DC / 24V AC



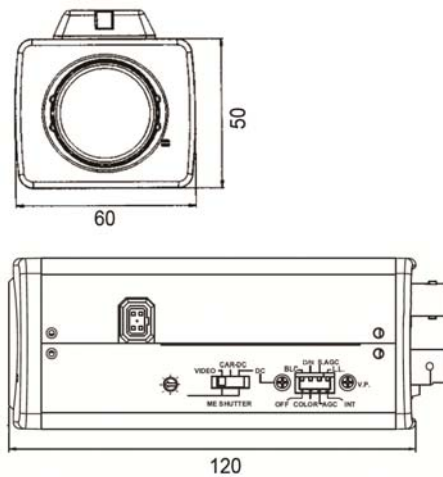
Housing & Bracket – HI11-TKHBL

- 11 Super Power IR LED, 6pcs x 25° / 5pcs x 45°
- IR Distance up to 395ft / 120m ▲
- User Adjustable IR LED Intensity (VR), Factory Default 80% ◆
- Fully-Cable Managed Bracket; Uses professional rust-proof stainless steel screws
- IP66 Rating; Heater & Blower; I/O
- 24V AC, 60VA (Power Ready Plug for 12V DC Camera)

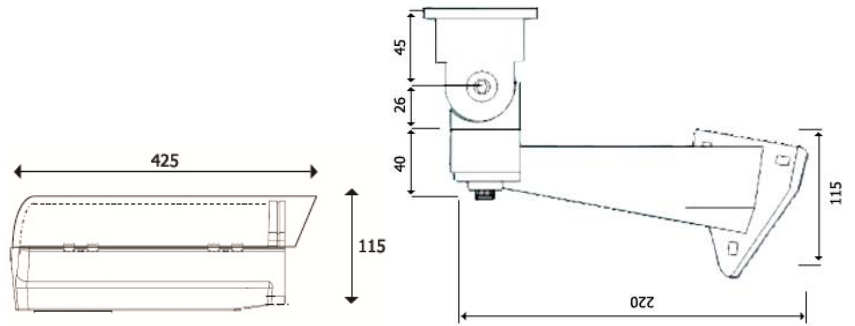
▲ ◆ Please see page 6 for details

DIMENSIONS

Camera – SHM-7540LPDN-IO



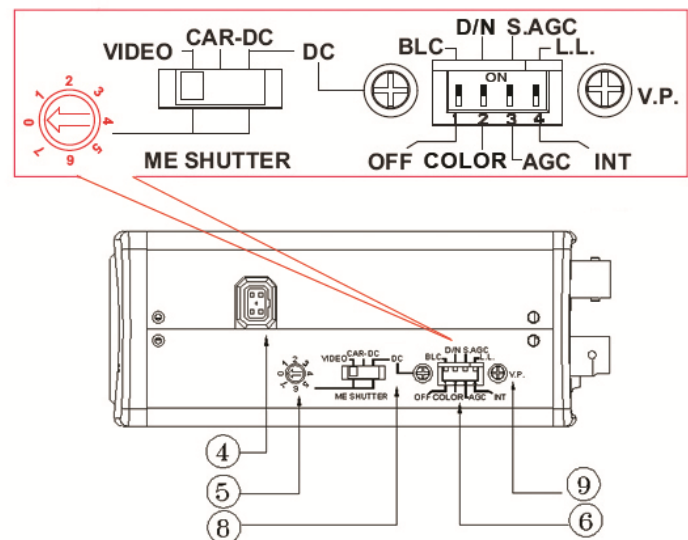
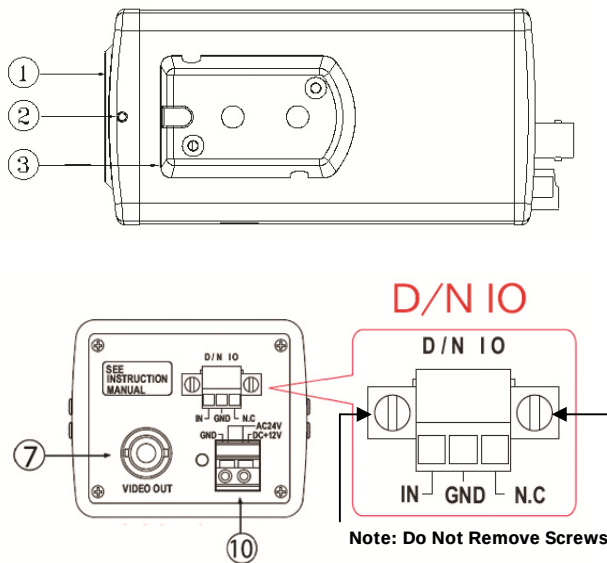
Housing & Bracket – HI11-TKHBL



- Max Load: 3500g
- Material: Die-cast aluminum alloy with light ivory powder coated and stove finish
- Scan Angle: 180°
- Title Angle: 90°
- Net Weight: 900g
- Fixing: 3 Screws with bushings

PARTS & FUNCTIONS

Camera – SHM-7540LPDN-IO



① Lens Mount

This mount is used to install a CS mount lens.
CS adaptor ring is required if using a C mount lens.

② CS Mount Fixing Screw

Screw for fixing mount and adjusting back focus if needed.

③ Mount Adaptor

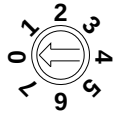
This adaptor can be attached to either the top or bottom of unit.

④ Auto Iris Lens Connector (4-pin type)

The lens connector supplies the auto-iris lens (not supplied) with DC power and a video signal or DC control signal.

⑤ ME/AES Shutter Control

- (0) 1/100 (120) sec. (1) 1/190 sec.
 (2) 1/350 sec. (3) 1/610 sec.
 (4) 1/1120 sec. (5) 1/2000 sec.
 (6) 1/3240 sec. (7) 1/4000 sec.



Shutter Speed	Camera to object moving speed		
	45~60ft (15~20m)	60~100ft (20~35m)	100~180ft (35~60m)
1/100 sec			
1/190 sec			
1/350 sec			
1/610 sec	15~35 mi/hr (30~60 Km/hr)	45~45 mi/hr (45~75 Km/hr)	
1/1120 sec	20~40 mi/hr (35~65 Km/hr)	35~53 mi/hr (55~85 Km/hr)	
1/2000 sec	25~45 mi/hr (45~75 Km/hr)	40~60 mi/hr (65~95 Km/hr)	
1/3240 sec	30~50 mi/hr (50~80 Km/hr)	50~62 mi/hr (80~100 Km/hr)	50~62 mi/hr (80~100 Km/hr)
1/4000 sec	35~55 mi/hr (60~90 Km/hr)	55~65 mi/hr (90~105 Km/hr)	55~65 mi/hr (90~105 Km/hr)

*The table above is only for reference. Values may change due to the angle of the camera and the installation location.

⑥ Control Switch

- SW1. BLC: Backlight Compensation OFF/BLC switch
 SW2. Day/Night Mode: D/N / Color switch
 SW3. AGC: Automatic Gain Control AGC/S.AGC switch
 SW4. Sync Mode: Sync Mode Selection L.L/INT switch

⑦ Video Connector

Output for connecting to a video monitor or recorder.

⑧ Auto Iris Mode Selection Switch

For switching the output from the auto iris connector. Shutter speed is fixed at 1/100(120) sec. when switch is set to DC or VIDEO position.

DC: To be set when using a auto iris lens. Be sure to adjust proper DC level for D&N operation.

CAR-DC: To be set when using for license plate capture. (Car speed is up to 90 mi/hr (150 km/hr) in the daytime and 90 mi/hr (150 km/hr) at night with external IR LEDs).

VIDEO: To be set when using an auto iris lens with built-in amp.

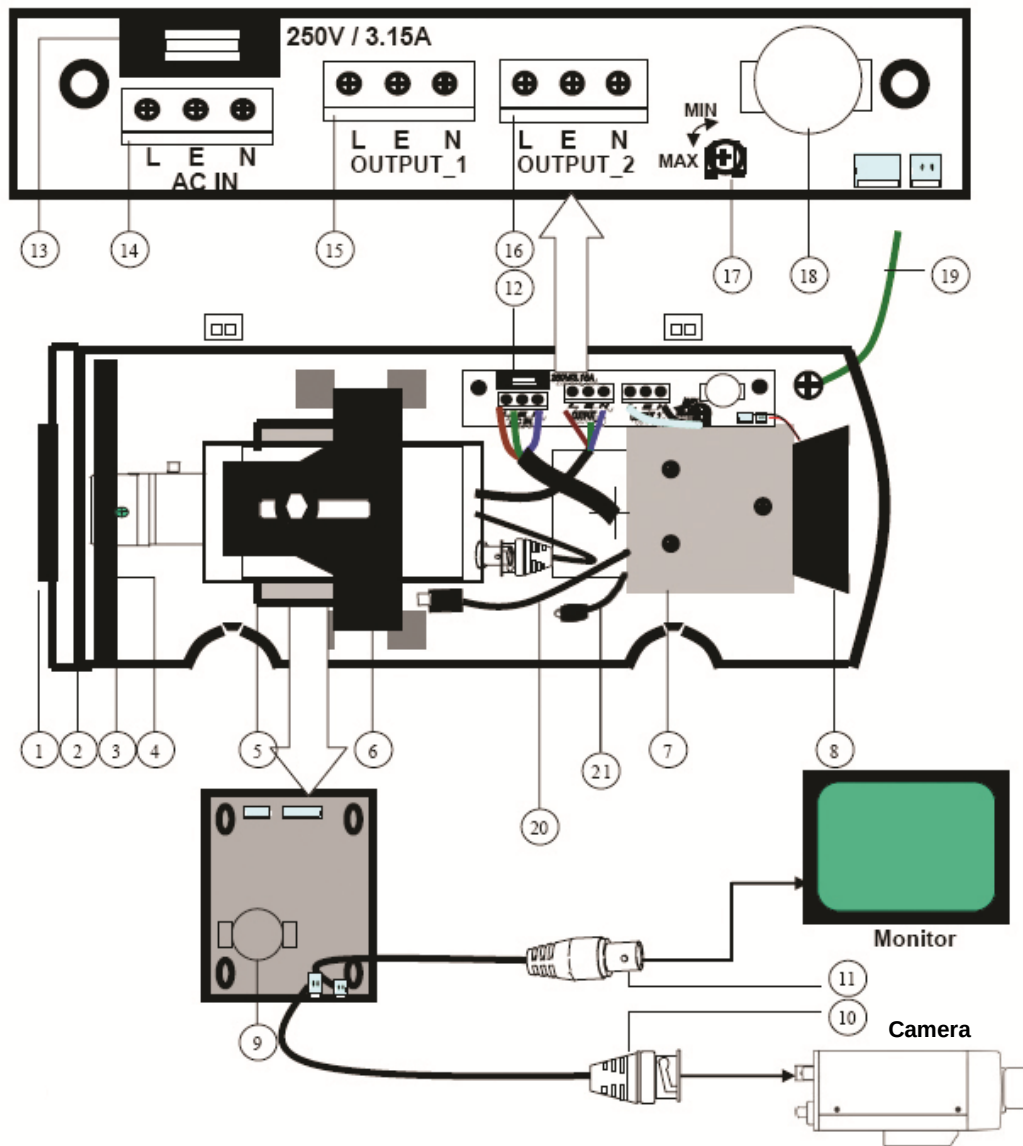


⑨ V.P. (Vertical Phase) Adjustor

Used to adjust the vertical phase of the video output signal

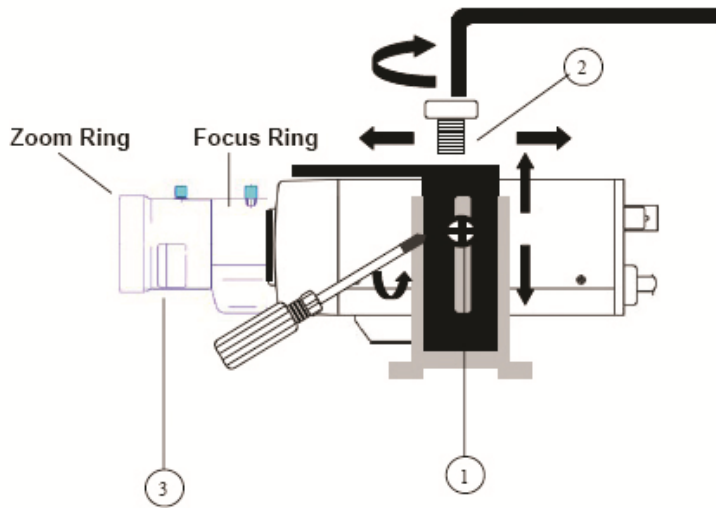
⑩ Power Input Terminal

Connect the power supply of 12V DC or 24V AC.



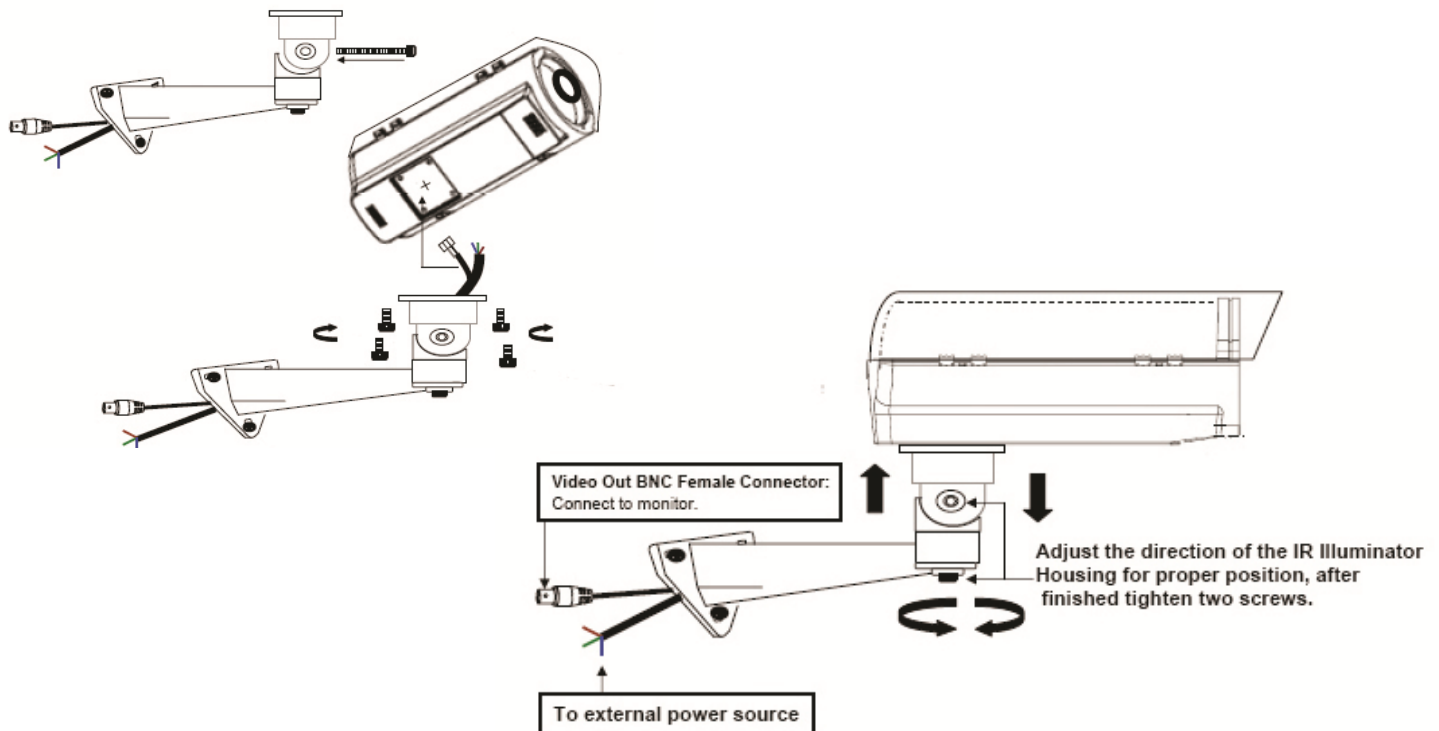
1. Lens Cap with Heater
2. Temper Glass
3. IR LED: 7pcs or 11pcs Super Power IR LED with Refractor
4. IR Board and IR Board Bracket
5. Universal IR Control Circuit Board: When the IR light turns on, it automatically adjusts the color to monochromatic through the universal IR control circuit.
6. Camera Bracket
7. Power Supply Unit: 24V AC input, 60VA
8. Blower and Blower Bracket
9. Thermostat Switch
10. Video Input BNC Male Connector: Connect to camera
11. Video Out BNC Female Connector: Connect to monitor
12. Terminal Board
13. Fuse Holder: With 250V / 3.15A fuse
14. AC IN Terminal block: 24V AC external power input
15. OUTPUT_1 Terminal block: Plug and fix the power cable of camera
16. OUTPUT_2 Terminal block: To power supply unit
17. VR: Adjust VR to set Infrared LED activation level
Factory default 80% -- If there is not enough IR light, adjust the level to maximum 100% ♦
18. Thermostat Switch: Turns on at 35°C / 95°F and turns off at 25°C / 77°F for Blower
19. Ground wire: To top cover
20. 12V DC Power-in jack: To camera / center+, outer- **Internal / Line Lock (AC Version Only)**
When using a camera which requires a 24V AC power input, please run a separate power line to the camera Internal / Line Lock (AC Version Only); Must use 24V AC camera with Line Lock (12V DC cameras do not have line lock).
21. Flying Bare Lead Wire: When the wire is not in use, cover it with the screw-on connector or tape the tip with tape to prevent damages caused by the bare lead wire.

INSTALLATION

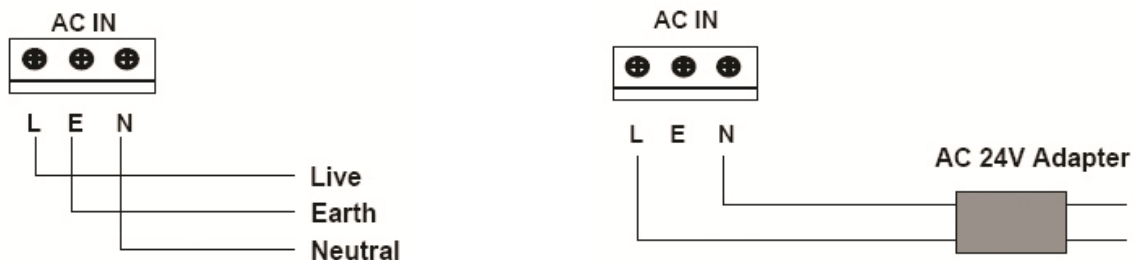


1. Loosen two screws on both sides of the camera bracket first.
2. Use the provided screw to fix the camera (not included) on the camera bracket.
3. Adjust zoom, focus and iris of the lens on the camera.
4. Adjust the direction of the camera for proper position, after finished tighten all screws.

How to install cables through the mounting bracket:



EXTERNAL POWER INPUT CONNECTION



NOTE: When using two-cord power cable, please connect them to "Live" and "Neutral."

SPECIFICATIONS

Camera

PIC	L-806	
Model	SHM-7540LPDN-IO	SHM-7540LPDN-IOP
TV System	NTSC	PAL
Image Sensor	1/3" Sony Super HAD CCD II	
Resolution ; DSP	540 TV Lines ; Sony HQ-1	
Total Pixels	811(H) x 508(V)	795(H) x 596(V)
Video Output	1.0Vp-p Composite / 75ohms	
Minimum Illumination	0.08 Lux @ F1.0 (Color mode automatically switches to B/W mode under 2 Lux)	
IR Sensitivity	700~1100nm	
Mechanical IR Cut Filter (ICR)	External controlled by D&N IO Color (In: 0V or normal open) / D&N (In: 5~12V DC or normal close)	
Electronic Shutter Speed	AES: 1/50(60) sec ~ 1/100,1000 sec	
	(0) 1/100(120) sec	(1) 1/190 sec
	(2) 1/350 sec	(3) 1/610 sec
	(4) 1/1120 sec	(5) 1/2000 sec
	(6) 1/3240 sec	(7) 1/4000 sec
Intelligent Shutter Speed	Capturing license plate for vehicle speeds up to 90 mi/hr (150 km/hr) in the daytime and 90 mi/hr (150 km/hr) at night with external IR LEDs	
Back Light Compensation	ON/OFF Switchable	
Auto Gain Control	AGC / Super AGC	
Auto White Balance	AWB	
Day/Night	Mechanical IR Cut Filter (ICR); D/N / COLOR Switchable	
I/O	Yes	
DNR / Sens-up	Automatic; High Gain/Low Noise Amplifier	
Scan System	2:1 Interlace	
Synchronization	Internal / Line Lock (AC Version Only)	
S/N Ratio	More than 50dB (S.AGC OFF)	
Adjustment VR	DC Level, L.L. V-phase	
Automatic IRIS ; Connector	Video/DC ; D4 IRIS Jack	
Lens Mount	CS/C (with adaptor)	
Power Supply	12V DC / 24V AC	
Power Consumption	3.0W	
Operation Temperature	14°F ~ 122°F / -10°C ~ 50°C	
Storage Humidity	RH 80% or less	
Storage Temperature	-4°F ~ 140°F / -20°C ~ 60°C	
Dimension	4.72"(L) x 2.36"(W) x 1.97"(H) / 120mm(L) x 60mm(W) x 50mm(H)	
Weight	0.88 lbs / 400g	

Specifications are subject to change without notice

Housing & Bracket

Model	HI11-TKHBL
LED Quantity	11 Super Power IR LEDs
IR LED Beam Angle	6pcs 25° / 5pcs x 45°
IR Wave Length	850nm
IR Distance	395ft / 120m ▲
IR Light On/Off	Auto Light Sensor Control
Heater Control	64°F / 18°C (on) ; 82°F / 28°C (off)
Blower Control	95°F / 35°C (on) ; 77°F / 25°C (off)
IP Rating	IP66
Temper Glass Thickness	4mm
Mounting Bracket	Full-Cable Management
Construction	Die-Cast Aluminum Alloy
Coating	Ivory Powder Stove
Power / Transformer*	24V AC (+/-10%), 60VA
Power Consumption	16 Watts
Dimension	16.73"(L) x 6.30"(W) x 6.50"(H) / 425mm(L) x 160mm(W) x 165mm(H)
Camera Space	7.87"(L) x 4.33"(W) x 4.53"(H) / 200mm(L) x 110mm(W) x 115mm(H)
Weight	7.72 lbs / 3500g (w/out bracket) / 11.75 lbs / 5330g (with bracket)

Specifications are subject to change without notice

*Power Supply / transformer not included

▲ **NOTE 1:** IR light distances are entirely dependent upon environmental site conditions and the location at which the unit is situated.
The type of camera being used is also very important.

◆ **NOTE 2:** Factory default for the IR LED activation level is 80%. If there is not enough IR light, adjust the **VR** level to maximum 100%.

PACKAGE CONTENTS

- One (1) SHM-7540LPDN-IO/SHM-7540LPDN-IOP Camera
- One (1) HI11-TKHBL IR Illuminator Housing
- One (1) Fully-Cable Managed Bracket
- One (1) Main Accessories Pack
 - Three (3) Rust-proof Stainless Steel Wall Screws
 - Three (3) Rust-proof Stainless Steel Mounting Screws
 - Three (3) Stainless Steel Washers
 - Three (3) Plastic Washers
 - One (1) Allen Wrench
- One (1) Secondary Accessories Pack
 - Three (3) Screw-on Connectors
 - One (1) Rubber Pad
 - One (1) Rust-proof Stainless Steel Camera Screw
 - One (1) Plastic Washer
- One (1) Operational Manual

* For any returns, please include all components listed above with original packaging in **Resalable Condition**. **Absolutely No Returns** will be accepted if any component is missing/damaged or if any cable is cut or tampered with.

CAUTIONS

1. Never point the camera toward the sun

Do not expose the lens directly to the sun or to strong light as this may damage the pick-up device.

2. Handle this camera with care

Avoid any shock or bumping of the camera. Improper handling could damage the camera.

3. Requires a proper operating environment

This camera is designed for outdoor or indoor use. The allowable temperature range for operation of this camera is between 14°F ~ 122°F / -10°C ~ 50°C and the allowable humidity is 80%RH maximum.

4. Clean the front face to the pick-up device

It is recommended that the pick-up device surface be cleaned before lens installation or whenever the lens is changed. Cleaning should be done by using a chamois, a very fine soft cloth, lens tissue, or cotton tipped applicator and ethanol to carefully remove any fingerprint or dust.

5. Check the power source voltage

The power source voltage should be within the specified range. (Camera must meet the specifications). Camera must be connected to a surge protector at all times.

6. Objects and liquid entry

Never push objects of any kind into this camera as this may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill any kind of liquid on the video product.

7. Servicing

Do not attempt to service this video product by yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all service to qualified servicing personnel.

8. Damage requiring service

Unplug this video product from the wall outlet and refer service to qualified servicing personnel under the following conditions:

- a. When the power supply cord or plug is damaged.
- b. If liquid has been spilled, or objects have fallen into the video product.
- c. If the video product has been dropped or the cabinet has been damaged.
- d. When the video product exhibits a distinct change in performance.

WARRANTY

OKINA USA Products are covered under warranty for one year from the date of purchase. The warranty will automatically be voided if any of the following occurs:

1. Product sticker is removed

If the product sticker is removed, we will not be able to confirm any information regarding when and where the product was purchased. We have no other way to verify the purchase record without the serial number on the product sticker; therefore, it should not be removed.

2. Product is modified in any way

If the product is scratched, damaged, or modified in a manner not described in this manual, the warranty will be voided immediately. It is the customer's responsibility to keep the product in good condition.

3. Power cable is cut

The power cable and any other cable should not be tampered with. Cutting or modifying of the cables will result in termination of the warranty.

Why PRO Series?

- Constructed from Heavy Duty Die-Cast Aluminum Alloy
- User adjustable IR LED intensity (VR)
- Uses professional rust-proof Stainless Steel Screws
- Fully-cable managed mounting bracket (except for IR7-TIR)
- IP66 rating or above on most products

High Resolution IR LED Day & Night Camera with ICR SIV7-T54AI922

- 1/3" Sony Super HAD CCD, 540 TV Lines
- 7 Super Power IR LED, IR Distance 200~250ft / 60~80m
- 9.0mm~22.0mm Auto Iris ED-IR Lens
- Built-in IR Cut Filter Removable (ICR)
- 24V AC, 60VA



IR LED Illuminator with Housing & Bracket HI7-TKHBL HI11-TKHBL

- 7 Super Power IR LED
- IR Distance up to 250ft / 80m
- 24V AC, 60VA

- 11 Super Power IR LED
- IR Distance up to 395ft / 120m
- 24V AC, 60VA



Housing & Bracket Front Opening HUB-TF HUB-TFHB



- IP67 Rating
- Includes Heater & Blower for HUB-TFHB
- 24V AC, 40VA

Housing & Bracket Side Opening HUB-TS HUB-TSHB



- IP68 Rating
- Includes Heater & Blower for HUB-TSHB
- 24V AC, 40VA

IR LED Illuminator IR7-TIR Possible Applications:

- 7 Super Power IR LED
- IR Distance up to 150~200ft / 45~70m
- Includes 1 Side & 1 Underneath Mounting Plate
- 24V AC, 40VA



Ceiling Mount Adaptor HUA-TCE



Corner Mount Adaptor HUA-TCO



Pole Mount Adaptor HUA-TPO

